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| Login |
| Password: String  UserID: String |
| getProfile(UserID); profile  getPassword(String)  checkPassword(String);bool |

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| Profile |
| Password: String  Activity: String  UserID: String  Age: int  Sex: String  Name: String |
| GetStats(); Statistic  GetActivtyData();ActivityArchive  AddRunData(ActivtyData, List<ActivityData>);  SearchFriend(String,List<user>);String  ViewFriend(String);  AddFriend(String);  Getuser();String  GetPassword();String  SetPassword(String);  GetAge(); int  GetSex();String  GetName();String |

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| --- |
| CreateProfile |
| UserID:String  Password:String  Age:int  Sex:String  Name: string |
| createProfile(UserID,Password);  setName(String);  setAge(int);  setSex(String); |

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| Friends |
|  |
| ViewFriendStat(Profile);Statistic  ViewFriendAge(Profile);int  ViewFriendSex(Profile);String  ViewFriendName(Profile);String |

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| ActivityArchive |
| Activtylist: List <ActivityData> |
| AddActivityData(ActivityData);  GetActivityData(Activitylist);  GetStatistics(Activitylist);Statistics  RemoveData(Activitylist); |

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| ActivityData |
| Activity: String  Caloriesused: double  HeartRate: double  Averagespeed: double  Pace: double  Dehydration: double  CumulDistance:double |
| Importdevicedata();  SetCaloriesused(double);  SetHeartRate(double);  SetAverageSpeed(double);  SetPace(double);  SetDehydration(double);  SetDistance(double);  SetActivity(String);  GetCaloriesused(); double  GetHeartRate(); double  GetAverageSpeed(); double  GetPace(); double  Getdehydration(); double  GetDistance(); double  GetActivity(); String |

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| Statistics |
| Activitylist:list<Activitydata>  Caloriesused: double  HeartRate:double  Averagespeed:double  Pace:double  Dehydration:double  CumulDistance:double |
| CalculateStatistics(list[ActivityData]);  GetTotalCaloriesused();  GetAverageHeartRate();  GetTotalAverageSpeed();  GetAveragePace();  GetAveragedehydration();  GetCumulativeDistance(); |

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| Smart Device |



Class Responsibilities:

Login – This allows the user to go to their existing profile with their username and password. Also checks the password for if its correct.

CreateProfile – The user can sets their information like sex, age, name. The main function allows for the creation of a profile.

Profile- All a user’s information can be saved, edited, and received through the profile. Allows the ability to add other friends, search for friends. Allows the ability to change the password,

Friends- Friends allows limited viewing of an added friend’s information, for example their statistics

ActivityArchive- Allows for the containment of all activity data no matter the activity, also allows the specific Activitydata to be removed and added.

ActivityData – Specific Activity information can be modified and given for information like pace, speed, etc. The ActivityData function also allows for this information to be received from a smart device.

Statistics- Receives a list from the ActivityArchive and then calculates the overall average statistics from that.